

## UNIQUE SOUND BARRIER ENHANCES NOISE MITIGATION

State Route 51 construction between Interstate 10 and Shea Boulevard will feature extensive efforts to help reduce freeway noise by modifying sound walls and paving the freeway with rubberized asphalt.

More than 600,000 square feet of Enviroc precast concrete panels will be installed along SR 51 to increase the height of existing sound walls, or erect new walls. The wall panels consist of an innovative product, known as autoclaved aerated concrete (AAC), a mixture of finely-ground quartz sand and binding material, permeated with pores and then steam cured. The result produces a steel-reinforced wall panel-with extraordinary sound absorbing characteristics-which weighs one-fifth as much as ordinary concrete. This type of concrete was first produced in

*Lightweight concrete wall panels will accelerate sound barrier installation on SR 51. Implanted steel reinforcement adds to the structural integrity of the panels.*



1923 for commercial building construction in Europe and the SR 51 project will be its first use as sound barrier on Valley freeways.

Installation of the lightweight concrete panels will require minimal impact on the residential side of existing sound walls. The panels will be constructed off-site and placed as part of a mobile operation, allowing a speedy and clean installation along the freeway.

SR 51 also will be resurfaced with rubberized asphalt between McDowell Road and Shea to provide a smooth, quiet ride.

Rubberized asphalt contains granules of shredded, recycled tires that are mixed with heated liquid asphalt and stones before being applied as a one-inch thick surface coat.

Approximately 1500 tires are used for every lane mile of rubberized paving.

### PROJECT PARTICULARS

- ❑ \$75.7 million contract awarded to the joint venture Design-Build team of Ames/Kraemer by the State Transportation Board, January 17, '03
- ❑ Project duration is 330 calendar days beginning March 31, '03
- ❑ An additional lane in each direction from the existing High Occupancy Vehicle (HOV) lanes on I-10 to Shea Boulevard that will serve as HOV lanes during peak traffic hours
- ❑ An elevated ramp over westbound I-10 between Van Buren and Roosevelt streets for the new SR 51 / I-10 HOV connection
- ❑ New westbound I-10 exit to SR51 / Loop 202, just south of Van Buren Street, leading to a new connector road parallel to I-10
- ❑ Relocation of the Jefferson/Washington Street entrance to westbound I-10, allowing motorists an option to remain on a new connector road to SR 51 /Loop 202, easing congested traffic movements on I-10
- ❑ Resurfacing with rubberized asphalt from McDowell Road to Shea Boulevard
- ❑ Installation of a continuous concrete median barrier and other safety improvements
- ❑ Additional sound mitigation measures, including new or higher noise walls where possible
- ❑ Modification of existing access to pedestrian crossings at Oak and Campbell streets
- ❑ Drainage improvements, including a storm water detention basin and underground storm water storage systems, from Highland to Montebello Avenue
- ❑ Freeway Management System improvements and new signage
- ❑ New median lighting will improve the freeway lighting system

AMES-KRAEMER  
**AK**  
JOINT VENTURE



### FOR MORE INFORMATION

#### Project Hotline:

**(602) 248-3098**

**Daily updates on planned closures & restrictions**

#### Website:

**www.SR51.com**

**Complete construction information and scheduling**

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# A R I Z O N A D E P A R T M E N T O F TRANSPORTATION



## CONSTRUCTION ALERT

[www.SR51.com](http://www.SR51.com) • MARCH 2003



A \$75.7 million, year long renovation project is starting to modernize State Route 51, including modifications to a key connection from Interstate 10. New carpool lanes from I-10 to Shea Boulevard will reduce congestion, enhanced sound barriers will separate adjacent neighborhoods from the freeways and nearly 10 miles of SR 51 between McDowell Road and Shea will be resurfaced with rubberized asphalt for a smooth, quiet ride.

An innovative proposal to accelerate construction, submitted by a joint venture of Ames Construction and Edward Kraemer & Sons, was accepted by the State Transportation Board in January. The addition of carpool lanes and freeway to freeway HOV (High Occupancy Vehicle) connections are long term goals integral to regional transportation planning on all Valley freeways. Similar improvements have been completed on Interstate 17 and the U.S. 60 Superstition Freeway as Design-Build projects.

The SR 51 Design-Build team has divided the ten mile project into three segments, each with its own project manager and individual ADOT quality control crews.

The most complex construction occurs in the southern segment, south of McDowell Road. An elevated ramp bridge will be constructed to carry new carpool lanes over westbound I-10 to the SR 51 / Loop 202 interchange where an HOV connection is completed. Beyond the ramp bridge, a relocated westbound I-10 exit will link to a new northbound connector road between Washington Street and the freeway to freeway interchange. New bridges for the HOV ramp, the new connector road and the relocated westbound I-10 exit cross over Van Buren Street. In addition, median gaps at the I-10 crossings of Jefferson/Washington and Van Buren streets will be closed for the median widening, and the I-10 entrance from the Washington will be relocated.

Reconstruction in the center segment from McDowell to Glendale Avenue requires the widening of SR 51's crossing at McDowell and total replacement of sound walls south of Thomas Road. New drainage systems will also reduce storm water interference with traffic at Highland Avenue, while interchanges at Highland and Colter Street will also be improved.

In the north segment, Glendale to Shea, rapid completion of HOV lanes in the open median is expected.

Continuous concrete barrier will separate new carpool lanes, freeway lighting and signing will be updated, and landscaping will be preserved to the greatest extent possible. New sound barrier will be installed on the east side of I-10 where the new connector road will carry westbound I-10 and city street traffic destined for SR 51 or Loop 202. SR 51 pedestrian crossings at Oak Street and Campbell Avenue will also be upgraded.

*Photo Illustration of finished I-10 HOV connection*



*Existing I-10*



Construction zones will be established as quickly as possible to get the short duration project under way. Traffic flow on SR 51 will be maintained with at least three lanes in each direction during peak travel hours. Nighttime and weekend restrictions and closures will be required on the freeway and at the Highland and Colter interchanges as work advances.

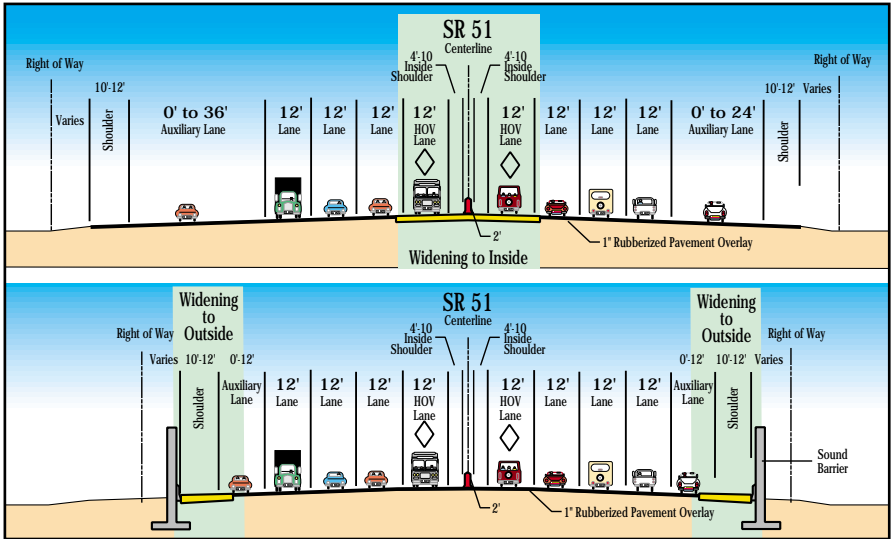
A construction by-pass will carry westbound I-10 around HOV bridge construction during planned closures this fall. The Jefferson/Washington entrance to westbound I-10 will also be closed during its relocation.

**HOTLINE (602) 248-3098 OR VISIT [www.SR51.com](http://www.SR51.com)**



# STATE ROUTE 51 RENOVATION • MARCH '03 TO MARCH '04

Lane additions on State Route 51 will fill in open medians or push new pavement to the outside edge of the highway corridor. Three lanes in each direction will remain open during peak travel times as construction advances. At the McDowell Road crossing, the existing bridge will be widened with concrete girders being attached to both sides. Traffic restrictions will be required. Access to pedestrian walkways at Oak Street and Campbell Avenue will be finished to standards required by the Americans with Disabilities Act. Sound barriers will also be modified between McDowell and Shea Boulevard. New sound walls will be built, or existing walls heightened, with a new lightweight and durable material to further enhance noise mitigation efforts. Innovative construction sequencing assures minimal disruption to traffic. New lanes will be opened as they are completed.



¿Tiene preguntas o inquietudes sobre la carretera SR51? Llame al 602-248-3098 y deje su nombre y número telefónico para que una persona de habla hispana regrese su llamada.

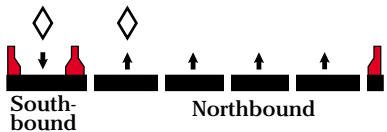
- New Roadway
- New Bridges
- Existing Bridges
- Continuous Barrier
- Existing Ramps



New bridge crossings at Van Buren Street will be built within the limits of the existing I-10 corridor boundary.

22nd Street

Connector Road  
Five lanes under Roosevelt bridge



LOOP 202

Rubberized asphalt overlay installation on U.S. 60, similar to that planned on SR 51, was completed late last year.

## SR 51 CONSTRUCTION CHRONOLOGY

McDowell Rd. to Thomas Rd.	7/86
Thomas to Highland Ave.	7/88
Thomas Traffic Interchange	7/90
Highland to Glendale Ave.	8/90
Glendale to Northern Ave.	4/91
Northern to Shea Blvd.	2/95
Shea Traffic Interchange	7/96
Shea to Bell Rd.	6/99
Bell to Loop 101 Pima (Planned)	6/03

The gap between I-10's crossings at Washington and Jefferson streets will be closed to accommodate new HOV lanes.

HOV bridge construction over westbound I-10, scheduled to begin this fall, will require traffic to shift onto a construction by-pass during planned closures. The new connector road between Washington Street and the SR 51/ Loop 202 freeway-to-freeway interchange will serve as the by-pass, returning traffic to I-10 from a temporary connection just north of Roosevelt. Bridge work is expected to take about five months.

New Exit  
SR 51 - Loop 202  
(Via New Connector Road)

Washington/Jefferson  
Entrance to I-10

Washington/Jefferson  
Entrance to New Connector Road

Right of Way  
22nd Street

Typical sections of new and existing roadway and ramps from just south of Van Buren Street.